

CLAIMS

What is claimed is:

1. An apparatus for harvesting a bone core, comprising:
 - a collet assembly;
 - a chuck engageable member extending from said collet assembly operable to interconnect a selected chuck with said collet assembly; and
 - a harvesting member selectively engageable with said collet assembly;wherein said harvesting member is able to move said collar between said engaged position and said non-engaged position;
- wherein said harvesting member is able to move said collar generally with a manual force.

2. The apparatus of claim 1, wherein said collet assembly includes:
a sleeve defining an internal bore;
a collar disposed within said internal bore;
wherein said collar is moveable, within said sleeve, between an engaged position and a non-engaged position.

3. The apparatus of claim 1, wherein when said harvesting member has moved said collar to said engaged position said harvesting member is selectively held within a portion of said internal bore.

4. The apparatus of claim 2, wherein said collar is operable with said sleeve to define a substantially quick connect interaction wherein said harvesting members are able to quick connect with said collet assembly to provide a selected interconnection between said harvesting member and said collet assembly.

5. The apparatus of claim 1, further comprising:
a graspable member including a chuck extending from said graspable member to engage said chuck engageable member;
wherein said chuck engages said chuck engageable member during the harvesting of the bone core.

6. The apparatus of claim 5, wherein said graspable member includes a drill motor able to rotate said collet after said chuck engages said chuck engageable member.

7. The apparatus of claim 6, wherein said harvesting member includes a collet engaging end and a harvesting end;

wherein said harvesting end defines a sawtooth that when rotated by said drill motor is able to cut a selected bone portion to collect a bone core within said harvesting member.

8. The apparatus of claim 5, wherein said graspable member includes a manually operable handle and a chuck extending from said manually operable handle;

wherein said chuck is able to engage said chuck engageable member to operably interconnect said collet with said manually operable handle to allow for harvesting of the bone core.

9. The apparatus of claim 1, wherein said harvesting member includes a first collet engaging end and a second cutting end;

wherein said cutting end defines a generally sharpened edge that is driveable into the selected bone.

10. The apparatus of claim 9, wherein said harvesting member is substantially cylindrical in shape and defines an internal bore;

wherein said sharpened end includes a sharpened edge defined by an edge of said cylinder;

wherein the cutting end is able to cut the bone core and collect it within said bore.

11. The apparatus of claim 10, further comprising a mallet to strike said manually operable handle to drive a selected end of said harvesting member into a bone to harvest the bone core.

12. The apparatus of claim 1, further comprising:
a plunger to assist in removing the bone core from said harvesting member;
wherein said harvesting member defines an internal bore in which said plunger is disposable;
wherein the bone core is collected within said harvesting bore and said plunger is operable to extract the bone core from said harvesting member.

13. The apparatus of claim 1, wherein said harvesting member defines a cannula and substantially equal in a dimension throughout said harvesting member.

14. The apparatus of claim 1, wherein said harvesting member including a first and a second end;
wherein the bone core may be removed from either of said first end or second end.

15. An apparatus for harvesting and implanting a bone core, comprising:
- a collet assembly including a selectively engageable mechanism and defining an internal bore;
 - a harvester to selectively engage said selectively engageable mechanism and to be disposed within said internal bore, said harvester defining a harvester bore;
 - a graspable assembly to selectively engage said collet and defining a graspable assembly bore that is generally aligned with said harvester bore when said graspable assembly selectively engages said collet assembly;
 - wherein said selectively engageable mechanism includes a generally quick-release mechanism wherein said harvester is engageable and disengageable from said selectively engageable mechanism with pressure from the user.

16. The apparatus of claim 15, further comprising:
a plunger moveable within said graspable assembly bore and said harvester bore;
wherein said plunger is operable with said harvester bore during a harvesting of the bone core;
wherein said collet is disengageable from said graspable assembly and said plunger is operable to remove the bone core from said harvester.

17. The apparatus of claim 15, wherein said collet includes:
a sleeve, and
a collar,
wherein said collar is operable with said sleeve to provide said selectively engageable mechanism.

18. The apparatus of claim 17, further including:
a pin extending from said collar to engage said harvester such that a torque applied to said collet is transferred to said harvester;
wherein said collar is slideable within a bore defined by said sleeve when acted upon by said harvester;
wherein said collar is biased in a first position by a compression spring disposed between said collar and said sleeve.

19. The apparatus of claim 15, wherein said harvester includes a collet engaging end and a harvesting end;

wherein said harvesting end includes a sharpened portion to cut a selected portion of a bone to harvest the bone core;

wherein said harvester is operable to collect the bone core within said harvester bore.

20. The apparatus of claim 19, wherein said sharpened end includes at least one of a sawtooth and a generally planar edge.

21. The apparatus of claim 15, wherein the bone core may be removed from either of said collet engaging end and said harvesting end.

22. The apparatus of 21, wherein said graspable assembly includes a drill motor that is operably interconnected with said sawtooth to rotate said sawtooth to cut a selected portion of the bone.

23. The apparatus of claim 21, wherein said graspable assembly includes a handle that is strikeable with a mallet;

wherein said handle is operably connected to said planar edge such that such planar edge may be driven into the bone with said mallet.

24. The apparatus of claim 15, wherein the bone core is collectible within said harvester bore and said plunger is operable to remove the bone core from said harvester bore.

25. The apparatus of claim 15, wherein said plunger is able to push the selected bone portion into a selected position from the harvester substantially directly from the harvester.

26. The apparatus of claim 25, wherein said harvester bore is substantially equal in at least one dimension throughout.

27. A method of harvesting and implanting a bone core, comprising:
- interconnecting a harvesting member with a collet member in a quick-release manner;
 - interconnecting said collet and a graspable member;
 - driving said harvesting member into a selected bone portion;
 - trapping a selected length of bone within said harvesting member;
- and
- removing said selected length of bone from said harvesting member into a selected location.

28. The method of claim 27, wherein interconnecting said collet with a graspable member includes selectively locking said collet member to a graspable handle that is strikeable with a mallet.

29. The method of claim 28, wherein driving said harvesting member includes striking said graspable member with a mallet to drive said harvesting member into the selected bone portion.

30. The method of claim 27, wherein interconnecting said collet with a graspable member includes selectively connecting said collet to a drill motor such that said drill motor is able to rotate said collet.

31. The method of claim 30, wherein driving said harvesting member includes:

rotating said harvesting member with said drill motor; and
pressing said harvesting member into the selected bone portion to remove the selected length of bone into said harvesting member.

32. The method of 27, further comprising:
disposing said harvesting member with said trapped selected length of bone relative to an implant site; and
wherein removing said selected length of bone includes pushing said selected length of bone into the implant site.

33. The method of claim 27 further comprising:
disposing a plunger through at least a portion of said harvesting member;
wherein removing said selected length of bone includes pushing said selective length of bone from said harvester into the implant site with the plunger.

34. The method of claim 27, wherein the harvesting member includes a first end and a second end, wherein removing said selective length of bone includes removing the selected length of bone from at least one of the first end and the second end.

35. An instrument for harvesting a selected bone core, comprising:
- a graspable member operable to be grasped by a user;
 - a harvest member operable with said graspable member to harvest the selected bone core;
 - a connecting member operable to selectively interconnect said graspable member and said harvesting member;
 - wherein said connecting member is operable to connect in a substantially quick-release manner to at least one of said graspable member and said harvesting member.

36. The instrument of claim 35, wherein said graspable member includes at least one of an impact handle and a drill motor.

37. The instruments of claim 35, wherein said harvest member includes a cannula including a cutting end including at least one of a sharpened edge and a saw tooth.

38. The instrument of claim 35, wherein said connecting member connects with said harvest member;
wherein said harvest member can be engaged and disengaged from said connecting member with a substantially axial motion alone.

39. The instrument of claim 35, wherein said harvest member is removably coupled to said a connecting member.

40. The instrument of claim 35, wherein said graspable member is removably coupled to said a connecting member.

41. An instrument for forming a selected core of a bone, comprising:
- a harvesting member operable to be driven into a selected portion of bone;
 - said harvesting member defining a cannula including a dimension substantially equal throughout a length of said harvesting member; and
 - a graspable portion extending from said harvesting member such that said harvesting member can be positioned relative to a selected portion of bone for forming the bone core.

42. The apparatus of claim 41, further comprising:
a collet portion operably interconnecting said harvesting member
and said graspable portion;
wherein said interconnection with at least one of said harvesting
member and said graspable portion is a substantially quick release connection.
43. The apparatus of claim 41, further comprising:
a plunger member;
wherein said plunger member is operable to be moved through said
internal cannula to remove the selected bone core from the cannula.